



FOREST PEST MANAGEMENT

AERIAL DETECTION SURVEY OF FOREST INSECT AND DISEASE ACTIVITY, NORTHERN VIRGINIA

LAND OWNERSHIP OR SURVEY AREA: Northern Virginia

STATE: Virginia

AREA WITHIN SURVEY BOUNDARY: 3,000,000 acres

DATE: June 24, 1981

PERCENT COVERAGE: 25%

AIRCRAFT: Cessna 182

CREW: Caleb Morris - Virginia Division of Forestry; C.W. Dull - FPM

REPORT PREPARED BY: C.W. Dull

SURVEY OBJECTIVES

The objective of the survey was to detect forest insect and disease activity on the Northern Virginia area. A cooperative aerial detection survey was conducted by the Virginia Division of Forestry and the U.S. Forest Service to delineate areas of defoliation. Special emphasis was placed on detecting areas of gypsy moth, Lymantria dispar (Linnaeus), defoliation, if present.

SURVEY RESULTS

Extensive areas of defoliation were observed, as previously reported. A total of 186,750 acres was defoliated of which 64,365 were heavily defoliated. The largest areas of defoliation were found on the Lee Ranger District of the George Washington National Forest on the Massanutten Mountain and along highway 55 at the Virginia-West Virginia state line. Another large area was found south of highway 50 at the Warren County, Clarke County, and Fauquier County intersection. Defoliation was subjectively categorized as light, moderate or heavy, depending on the appearance of the trees. Figure I illustrates the location of the defoliated areas in each category.

The survey was concentrated along the forested ridges at a time when gypsy moth activity would be most evident. Due to the extensive activity of other forest defoliators, gypsy moth activity could have been masked within the areas of defoliation. However, in areas suspected containing gypsy moth populations large enough to cause visible defoliation, no defoliation was observed. In addition, an early spring defoliator complex caused by the extensive defoliation had already begun to refoliate and recent defoliation which would have been caused by gypsy moth was not evident. Ground checks in the defoliated areas by the Virginia Division of Forestry found a defoliator complex consisting of the fall cankerworm, spring cankerworm, linden looper, forest tent caterpillar and additional minor leaf feeders including the half-winged geometer.

CONCLUSION

The incidence, severity and extent of hardwood defoliator activity throughout the forested areas in Northern Virginia has greatly increased this year. Natural parasites and predators normally keep these insect populations under control. In areas of heavy defoliation, growth loss and branch dieback may occur. If 2-3 consecutive years of heavy defoliation occurs in the same area, some tree mortality may be expected. Refoliation was occurring in all areas previously defoliated. Gypsy moth populations have been confirmed by Virginia Division of Forestry in Fairfax, Loudoun, Charolette and Fauquier Counties within the survey area. However, defoliation caused by gypsy moth was not observed during this survey.

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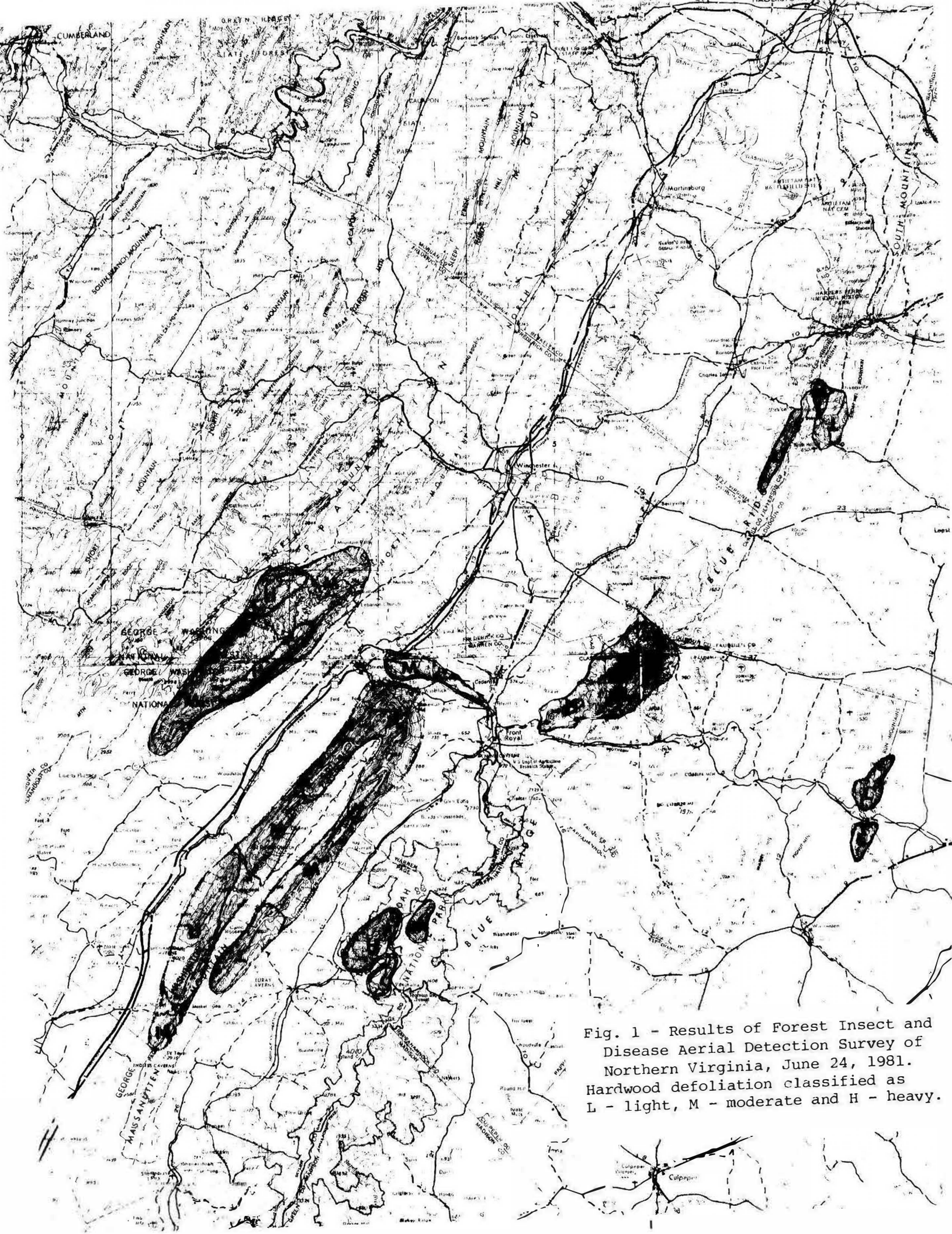


Fig. 1 - Results of Forest Insect and Disease Aerial Detection Survey of Northern Virginia, June 24, 1981. Hardwood defoliation classified as L - light, M - moderate and H - heavy.